



Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

Southeast Regional Office • 20 Riverside Drive, Lakeville MA 02347 • 508-946-2700

Charles D. Baker
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October 14, 2015, Corrected November 6, 2015

Mr. Mark Heilman
Plant Manager
Bird Inc., dba CertainTeed
Roofing Products Group
1077 Pleasant Street
Norwood, Massachusetts 02062

RE: Norwood
Transmittal No.: X267427
Application No.: SE-15-022
Class: SM80-7
FMF No.: 131154
AIR QUALITY PLAN APPROVAL

Dear Mr. Heilman:

The Massachusetts Department of Environmental Protection ("MassDEP"), Bureau of Air and Waste, has reviewed your Limited Plan Application ("Application") listed above. This Application concerns the proposed increase use of an existing water repellant material at your manufacturing facility located at 1064 and 1077 Pleasant Street, in Norwood, Massachusetts ("Facility"). The two locations have been determined to be on contiguous property and under common control.

This Application was submitted in accordance with 310 CMR 7.02 Plan Approval and Emission Limitations as contained in 310 CMR 7.00 "Air Pollution Control," regulations adopted by MassDEP pursuant to the authority granted by Massachusetts General Laws, Chapter 111, Section 142 A-J, Chapter 21C, Section 4 and 6, and Chapter 21E, Section 6. MassDEP's review of your Application has been limited to air pollution control regulation compliance and does not relieve you of the obligation to comply with any other regulatory requirements.

MassDEP has determined that the Application is administratively and technically complete and that the Application is in conformance with the Air Pollution Control regulations and current air pollution control engineering practice, and hereby grants this **Plan Approval** for said Application, as submitted, subject to the conditions listed below.

Please review the entire Plan Approval, as it stipulates the conditions with which the Facility owner/operator ("Permittee") must comply in order for the Facility to be operated in compliance with this Plan Approval.

1. DESCRIPTION OF FACILITY AND APPLICATION

The Permittee operates both a fiberglass based roofing shingle manufacturing plant, granule manufacturing plant and a solar granular production plant /line located at 1077 and 1064 Pleasant Street, at your Norwood Facility. The main granule production plant and the solar granule production plant are located at the 1064 Pleasant Street portion of your facility. Granule production consists of three major operations: (1) rock drying, (2) crushing and screening, and (3) coating. The coating process for raw granules that are used in granule production follows the same general steps: (1) granule pre-heating¹; (2) granule coating; (3) rotary kiln curing; (4) rotary kiln cooling; (5) application of a water repellant and a naphthenic process oil; (5) transfer of granules to finished product silos.

In this Application, the Permittee as proposed to increase the amount of the same water repellant material currently being used, and requests an increase in the associated VOC and HAP air emission limits. The Applicant had requested the VOC and HAP emission limitations for the two granule production plants be combined, and federal enforceability be established by limiting water repellant material usage. Facility-wide annual emission limits remain unchanged.

The proposed water repellant, Wacker Silres BS-68, will be used in two locations: (1) at the existing main granule plant Emission Unit (EU) #103 - Granule Coloring, and; (2) at the existing solar granule plant EU#071 – Solar Granule Plant. No Pollution Control Device (PCD) is associated with the “oiler” used to apply the water repellant at EU #103². As the proposed water repellant is a negligible source of particulate matter (PM), the PM emission limits associated with EU #103 remain unchanged. The PCD associated with the “oiler” used to apply the water repellant at EU #071 is dust collector SGDC-1³. As the proposed water repellant is a negligible source of particulate matter (PM), production, operational, and emission limits for this PCD remains unchanged as well.

The Permittee has previously indicated the Facility is subject to Title 40 Code of Federal Regulation (CFR) Part 60 Subpart UU - Asphalt Processing and Asphalt Roofing Manufacture. MassDEP has accepted delegation of authority for this Subpart. The Permittee is subject to the notification, recordkeeping, reporting, monitoring, and testing requirements contained in this Subpart. The application of these standards to the Facility remains unaffected by the proposed changes in this Application.

The Permittee has also previously indicated the Facility is subject to 40 CFR Part 63 Subpart AAAAAA - Asphalt Processing and Asphalt Roofing Manufacturing and 40 CFR Part 60

¹ Granule feedstock consists of raw crushed granules at the main granule plant. Granule feedstock for solar granule production consists of either raw crushed granules or granules previously coated in the main granule plant (“intermediate product” granules).

² Two PCDs – dust collectors DC7 and DC8 – are associated with EU #103; however, these PCD are not associated with the water repellant application process at EU #103.

³ Minor residual off-gassing of the water repellant may occur after the granules leave the oiler at the Solar Granule Plant. These residual emissions would exhaust to dust collectors SGDC-1 and SGDC-4.

Subpart 000 – Nonmetallic Mineral Processing Plants. As MassDEP has not accepted delegation of authority for these Subparts at this time, you are advised to consult with the US Environmental Protection Agency (EPA), Region 1 – New England, regarding the applicability of these Subparts to your Facility, including notification, recordkeeping, reporting, monitoring, and testing requirements for which you may be subject. Questions concerning this matter should be directed to the EPA Region 1 at 5 Post Office Square, Suite 100, Boston, MA 02109-3912.

CertainTeed shall achieve Best Available Control Technology with the air cooling of granules prior application of the water repellant material to minimize volatilization of Volatile Organic Compounds (VOCs) and Hazardous Air Pollutants (HAPs) from the application of the water repellant to granules. In the main granule plant, volatilization of VOCs and HAPs is further minimized by additional cooling of the granules with water spray before the application of the water repellant material.

Existing Facility Approvals include:

- MassDEP Application/Approval MBR-06-IND-009 dated December 21, 2006, which describes EU103, and established facility-wide emission limits;
- MassDEP Approval 4P09032, dated January 27, 2010, which approved the installation and operation of a solar granule production line, and revoked MassDEP Approval 4P07010 dated October 30, 2007 concerning the installation and operation of a quench tank and packed bed scrubber;
- MassDEP Approval 4P10021, dated November 16, 2010, which approved modifications to the existing asphalt shingle manufacturing facility;
- MassDEP Approval 4P11002, dated February 16, 2011, which approved the installation and operation of a Particulate Matter (PM) Pollution Control Device (PCD) for the solar granule production line;
- MassDEP Approval SE-13-011, dated July 19, 2013, which approved the use of a new water repellant material.

2. EMISSION UNIT (EU) IDENTIFICATION

Each Emission Unit (EU) identified in Table 1 is subject to and regulated by this Plan Approval:

Table 1			
EU#	Description	Design Capacity	Pollution Control Device (PCD)
103 ¹	Existing Main Granule Plant – Coloring Process	30 tons granules per hour	See note 2.
071	Existing Solar Granule Plant	16,080 tons per year ³	SGDC-1 ⁴

Table 1 Key:

EU# = Emission Unit Number

PCD = Pollution Control Device
DC = Dust Collector
SGDC-1 = Solar Granule Plant Dust Collector #1
VOC = Volatile Organic Compounds
HAP = Hazardous Air Pollutants

Notes:

1. As described in MassDEP Approval MBR-06-IND-009, dated December 21, 2006.
2. Two PCDs – dust collectors DC-7 and DC-8 – are associated with EU #103 and are described in MassDEP Approval MBR-06-IND-009; however, these PCD are not associated with the water repellant application process at EU #103. This current Plan Approval (SE-13-011) pertains to changes in VOC and HAP usage and emission limitations. Operation limits of DC7 and DC8 remain unchanged.
3. Tons per year material usage are based on a consecutive 12-month period.
4. Five PCDs – dust collectors SGDC-1 through SGDC-5 – are associated with EU#071 and are described in MassDEP Approvals 4P09032 and 4P11002. The particulate matter pollution control device associated with the oiler used at EU #071 is SGDC-1, which is described in MassDEP Approvals 4P09032 and 4P11002. Residual off-gassing of VOCs and HAPs from finished granules may also occur from the particulate matter pollution control device SDGC-4, also described in MassDEP Approvals 4P09032 and 4P11002. This current Plan Approval (SE-13-011) addresses VOCs and HAPs usage which pass through these PCDs. The operation and production limits of SGDC-1 and SGDC-4 for particulate matter remain unchanged.

3. **APPLICABLE REQUIREMENTS**

A. **OPERATIONAL, PRODUCTION and EMISSION LIMITS**

The Permittee is subject to, and shall not exceed the Operational, Production, and Emission Limits as contained in Table 2:

Table 2			
EU#	Operational / Production Limit	Air Contaminant	Emission Limit
103 & 071 (combined)	<ol style="list-style-type: none"> 1. 8.8 tons of water repellant material used per month. 2. 65.2 tons of water repellant material used per consecutive 12-month period. 3. Maximum VOC content of 150 grams per liter of water repellant material. 4. Maximum HAP content of 150 grams of methanol (a HAP) per liter of water repellant material. 	VOC	1.4 TPM 9.5 TPY
		HAP (single)	1.4 TPM 9.5 TPY
		HAPs (total)	2.0 TPM 9.5 TPY
Facility-wide	See note 1.	VOC	5.3 TPM 40.0 TPY
		HAP (single)	2.1 TPM 9.5 TPY
		HAPs (total)	6.2 TPM 24.5 TPY

Table 2 Key:

EU# = Emission Unit Number
VOC = Volatile Organic Compounds
HAP (single) = maximum single Hazardous Air Pollutant
HAPs (total) = total Hazardous Air Pollutants
TPM = tons per month
TPY = tons per consecutive 12-month period

Note:

1. Facility-wide operational / production limits as well as facility-wide emission limits for oxides of nitrogen, carbon monoxide, sulfur dioxide, and particulate matter remain unchanged as contained in Table 5 of MassDEP Approval MBR-06-IND-009, dated December 21, 2006. Facility-wide HAP emissions limits (only) are also re-stated in MassDEP Approval No. 4P10021 dated November 10, 2010.

B. COMPLIANCE DEMONSTRATION

The Permittee is subject to, and shall comply with, the monitoring, testing, record keeping, and reporting requirements as contained in Tables 3, 4, and 5:

Table 3	
EU#	Monitoring and Testing Requirements
103 & 071 (combined)	1. The Permittee shall monitor each month tons of water repellant material used.
Facility- wide	2. The Permittee shall monitor all operations to ensure sufficient information is available to comply with 310 CMR 7.12 Source Registration.
	3. If and when MassDEP requires it, the Permittee shall conduct emission testing in accordance with USEPA Reference Test Methods and regulation 310 CMR 7.13.

Table 3 Key:

EU# = Emission Unit Number

Table 4	
EU#	Record Keeping Requirements
103 & 071 (combined)	1. Sufficient records shall be prepared and maintained to demonstrate compliance for each calendar month. Such records shall include, but are not limited to tons of water repellant material used.
Facility- wide	2. The Permittee shall maintain adequate records on-site to demonstrate compliance with all operational, production, and emission limits contained in Table 2 above. Records shall also include the actual emissions of air contaminant(s) emitted for each calendar month and for each consecutive twelve month period (current month plus prior eleven months). These records shall be compiled no later than the 15 th day following each month. An electronic version of the MassDEP approved record keeping form, in Microsoft Excel format, can be downloaded at http://www.mass.gov/dep/air/approvals/aqforms.htm#report .
	3. The Permittee shall maintain records of monitoring and testing as required by Table 3.
	4. The Permittee shall maintain a copy of this Plan Approval, underlying Application and the most up-to-date SOMP for the EU(s) and PCD(s) approved herein on-site.
	5. The Permittee shall maintain a record of routine maintenance activities performed on the approved EU(s), PCD(s), and monitoring equipment. The records shall include, at a minimum, the type or a description of the maintenance performed and the date and time the work was completed.
	6. The Permittee shall maintain a record of all malfunctions affecting air contaminant emission rates on the approved EU(s), PCD(s), and monitoring equipment. At a minimum, the records shall include: date and time the malfunction occurred; description of the malfunction; corrective actions taken; the date and time corrective actions were initiated and completed; and the date and time emission rates and monitoring equipment returned to compliant operation.
	7. The Permittee shall maintain records to ensure sufficient information is available to comply with 310 CMR 7.12 Source Registration.
	8. The Permittee shall maintain records required by this Plan Approval on-site for a minimum of five (5) years.
	9. The Permittee shall make records required by this Plan Approval available to MassDEP and USEPA personnel upon request.

Table 4 Key:

EU# = Emission Unit Number

PCD = Pollution Control Device

SOMP = Standard Operating and Maintenance Procedure

USEPA = United States Environmental Protection Agency

Table 5	
EU#	Reporting Requirements
Facility-wide	1. The Permittee shall submit to MassDEP all information required by this Plan Approval over the signature of a “Responsible Official” as defined in 310 CMR 7.00 and shall include the Certification statement as provided in 310 CMR 7.01(2)(c).
	2. The Permittee shall notify the Southeast Regional Office of MassDEP, BAW Compliance & Enforcement (C/E) Chief by telephone (508) 946-2793, email sero.air@state.ma.us or fax (508) 946-2865 or (508) 947-6557 as soon as possible, but no later than one (1) business day after discovery of an exceedance(s) of Table 2 requirements. A written report shall be submitted to C/E Chief at MassDEP within three (3) business days thereafter and shall include: identification of exceedance(s), duration of exceedance(s), reason for the exceedance(s), corrective actions taken, and action plan to prevent future exceedance(s).
	3. The Permittee shall report annually to MassDEP, in accordance with 310 CMR 7.12, all information as required by the Source Registration/Emission Statement Form. The Permittee shall note therein any minor changes (under 310 CMR 7.02(2)(e), 7.03, 7.26, etc.), which did not require Plan Approval.
	4. The Permittee shall provide a copy to MassDEP of any record required to be maintained by this Plan Approval within 30-days from MassDEP’s request.
	5. The Permittee shall submit to MassDEP for approval a stack emission pretest protocol, at least 30 days prior to emission testing, for emission testing as defined in Table 3 Monitoring and Testing Requirements.
	6. The Permittee shall submit to MassDEP a final stack emission test results report, within 45 days after emission testing, for emission testing as defined in Table 3 Monitoring and Testing Requirements.

Table 5 Key:

EU# = Emission Unit Number

4. SPECIAL TERMS AND CONDITIONS

- A. The Permittee is subject to and shall comply with the Special Terms and Conditions as contained in Table 6:

Table 6	
EU#	Special Terms and Conditions
Facility-wide	<p>1. In consideration of the increased use of the existing water repellant material, MassDEP:</p> <ul style="list-style-type: none"> Rescinds the maximum allowable VOC and HAP emission limitations for all facility solar granule productions as contained in Table 2 of MassDEP Approval SE-13-011, and re-establishes the maximum allowable emission VOC and HAP emission limitations for all facility granule productions combined, as contained in Table 2 of MassDEP Approval SE-15-022. Rescinds the maximum allowable water repellant usage limitation for all facility solar granule productions as contained in Table 2 of MassDEP Approval SE-13-011, and re-establishes the maximum allowable water repellant usage limitation for all facility granule productions combined, as contained in Table 2 of MassDEP Approval SE-15-022. <p>All other conditions, provisos, requirements, and limitations contained in MassDEP Approvals MBR-06-IND-009, 4P09032, 4P10021, 4P11002 and SE-13-011 shall remain in effect. The Facility shall not exceed the emission limits and shall comply with approved conditions specified in the prior Plan Approval(s) unless specifically altered by this Plan Approval. Should there be any differences between Approvals, this Approval (SE-15-022) shall govern.</p>

Table 6 Key:

EU# = Emission Unit Number
VOC = Volatile Organic Compound
HAP = Hazardous Air Pollutant

- B. The Permittee shall install and use an exhaust stack, as required in Table 7, on each of the Emission Units that is consistent with good air pollution control engineering practice and that discharges so as to not cause or contribute to a condition of air pollution. Each exhaust stack shall be configured to discharge the gases vertically and shall not be equipped with any part or device that restricts the vertical exhaust flow of the emitted gases, including but not limited to rain protection devices known as “shanty caps” and “egg beaters.”
- C. The Permittee shall install and utilize exhaust stacks with the following parameters, as contained in Table 7, for the Emission Units that are regulated by this Plan Approval:

Table 7				
EU# / PCD#	Stack Height Above Ground (feet)	Stack Inside Exit Dimensions (feet)	Stack Gas Exit Velocity Range (feet per second)	Stack Gas Exit Temperature Range (°F)
071 / SGDC-1	40	0.833	0 - 46	Ambient
EU103 / DC-7	30	4.2	0 - 40	Ambient
EU103 / DC-8	26	2.2	0 - 40	Ambient

Table 7 Key:

EU# = Emission Unit Number

PCD# = Pollution Control Device #

°F = Degree Fahrenheit

SGDC = Solar Granule Dust Collector

5. GENERAL CONDITIONS

The Permittee is subject to, and shall comply with, the following general conditions:

- A. Pursuant to 310 CMR 7.01, 7.02, 7.09 and 7.10, should any nuisance condition(s), including but not limited to smoke, dust, odor or noise, occur as the result of the operation of the Facility, then the Permittee shall immediately take appropriate steps including shutdown, if necessary, to abate said nuisance condition(s).
- B. If asbestos remediation/removal will occur as a result of the approved construction, reconstruction, or alteration of this Facility, the Permittee shall ensure that all removal/remediation of asbestos shall be done in accordance with 310 CMR 7.15 in its entirety and 310 CMR 4.00.
- C. If construction or demolition of an industrial, commercial or institutional building will occur as a result of the approved construction, reconstruction, or alteration of this Facility, the Permittee shall ensure that said construction or demolition shall be done in accordance with 310 CMR 7.09(2) and 310 CMR 4.00.
- D. Pursuant to 310 CMR 7.01(2)(b) and 7.02(7)(b), the Permittee shall allow MassDEP and / or USEPA personnel access to the Facility, buildings, and all pertinent records for the purpose of making inspections and surveys, collecting samples, obtaining data, and reviewing records.
- E. This Plan Approval does not negate the responsibility of the Permittee to comply with any other applicable Federal, State, or local regulations now or in the future.

- F. Should there be any differences between the Application and this Plan Approval, the Plan Approval shall govern.
- G. Pursuant to 310 CMR 7.02(3)(k), MassDEP may revoke this Plan Approval if the construction work is not commenced within two years from the date of issuance of this Plan Approval, or if the construction work is suspended for one year or more.
- H. This Plan Approval may be suspended, modified, or revoked by MassDEP if MassDEP determines that any condition or part of this Plan Approval is being violated.
- I. This Plan Approval may be modified or amended when in the opinion of MassDEP such is necessary or appropriate to clarify the Plan Approval conditions or after consideration of a written request by the Permittee to amend the Plan Approval conditions.
- J. The Permittee shall conduct emission testing, if requested by MassDEP, in accordance with USEPA Reference Test Methods and regulation 310 CMR 7.13. If required, a pretest protocol report shall be submitted to MassDEP at least 30 days prior to emission testing and the final test results report shall be submitted within 45 days after emission testing.
- K. Pursuant to 310 CMR 7.01(3) and 7.02(3)(f), the Permittee shall comply with all conditions contained in this Plan Approval. Should there be any differences between provisions contained in the General Conditions and provisions contained elsewhere in the Plan Approval, the latter shall govern.

6. MASSACHUSETTS ENVIRONMENTAL POLICY ACT

MassDEP has determined that the filing of an Environmental Notification Form (ENF) with the Secretary of Energy & Environmental Affairs, for air quality control purposes, was not required prior to this action by MassDEP. Notwithstanding this determination, the Massachusetts Environmental Policy Act (MEPA) and 301 CMR 11.00, Section 11.04, provide certain “Fail-Safe Provisions,” which allow the Secretary to require the filing of an ENF and/or an Environmental Impact Report (EIR) at a later time.

7. APPEAL PROCESS

This Plan Approval is an action of MassDEP. If you are aggrieved by this action, you may request an adjudicatory hearing. A request for a hearing must be made in writing and postmarked within twenty-one (21) days of the date of issuance of this Plan Approval.

Under 310 CMR 1.01(6)(b), the request must state clearly and concisely the facts, which are the grounds for the request, and the relief sought. Additionally, the request must state why the Plan Approval is not consistent with applicable laws and regulations.

The hearing request along with a valid check payable to the Commonwealth of Massachusetts in the amount of one hundred dollars (\$100.00) must be mailed to:

Commonwealth of Massachusetts
Department of Environmental Protection
P.O. Box 4062
Boston, MA 02211

This request will be dismissed if the filing fee is not paid, unless the appellant is exempt or granted a waiver as described below. The filing fee is not required if the appellant is a city or town (or municipal agency), county, or district of the Commonwealth of Massachusetts, or a municipal housing authority.

MassDEP may waive the adjudicatory hearing-filing fee for a person who shows that paying the fee will create an undue financial hardship. A person seeking a waiver must file, together with the hearing request as provided above, an affidavit setting forth the facts believed to support the claim of undue financial hardship.

Enclosed is a stamped approved copy of the application submittal.

Should you have any questions concerning this Plan Approval, please contact Dan Kamieniecki by telephone at (508)-946-2717, or in writing at the letterhead address.

This final document copy is being provided to you electronically by the
Department of Environmental Protection. A signed copy of this document
is on file at the DEP office listed on the letterhead.

Thomas Cushing
Permit Chief
Bureau of Air and Waste

ecc: Norwood Board of Health/Dept of Health
Norwood Fire Department
MassDEP/Boston – Y. Tian
MassDEP/SERO – M. Pinaud
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